

# IMPORTANT INSTRUCTIONS - OPERATING MANUAL

Models: AK965L, AK965FL



Exhaust Fan

## READ AND SAVE THESE INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

**RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.**

### GENERAL SAFETY INFORMATION

**When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to person, including the following:**

1. Read all instructions before installing or using exhaust fan.
2. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
3. Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
4. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-related construction.
5. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA) and the American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), and the local code authorities.
6. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
7. Ducted fans must always be vented to the outdoors.
8. This unit must be grounded.
9. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.

**WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, DO NOT USE THIS FAN WITH ANY SOLID-STATE SPEED CONTROL DEVICE.**

**WARNING: DO NOT INSTALL OVER A TUB OR MOUNT IN A SHOWER STALL ENCLOSURE.**

10. Do not install into a ceiling thermally insulated to a value greater than R-40.
11. NEVER place a switch where it can be reached from a tub or shower.

**WARNING: DO NOT USE IN KITCHENS.**

**WARNING: THIS UNIT IS DESIGNED AND TESTED TO BE A SUPPLEMENTAL HEATER FOR USE WITH A TIMER OR A SWITCH. IT IS NOT INTENDED TO BE USED AS THE PRIMARY SOURCE OF HEAT AND CONTROLLED BY A THERMOSTAT.**

**CAUTION: FOR GENERAL VENTILATING USE ONLY. DO NOT USE TO EXHAUST HAZARDOUS OR EXPLOSIVE MATERIALS AND VAPORS.**

## SAVE THESE INSTRUCTIONS

# INSTALLATION INSTRUCTIONS

**CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.**

## SECTION 1

### Preparing the Unit

1. Unpack fan from the carton and confirm that all pieces are present. In addition to the unit you should have:

- 1 - Grill with Light Lens
- 4 - Mounting Rails
- 2 - 2 Function Switches
- 1 - Quad Wall Plate
- 1 - Instruction/Safety Sheet

2. Remove the two machine screws holding the light reflector in place. Keep the reflector and screws in the carton until needed so they do not get damaged or lost (Figure 1).

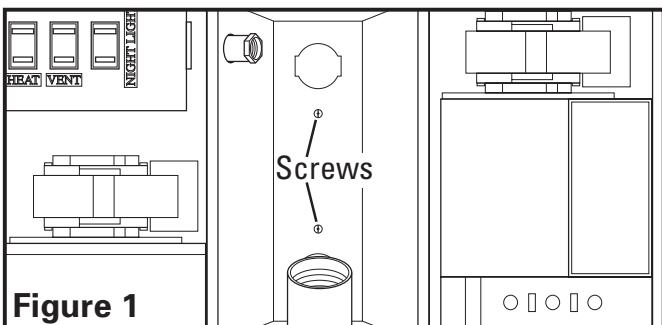


Figure 1

3. Remove the wire compartment cover by loosening the two screws holding the cover in place (Figure 2).

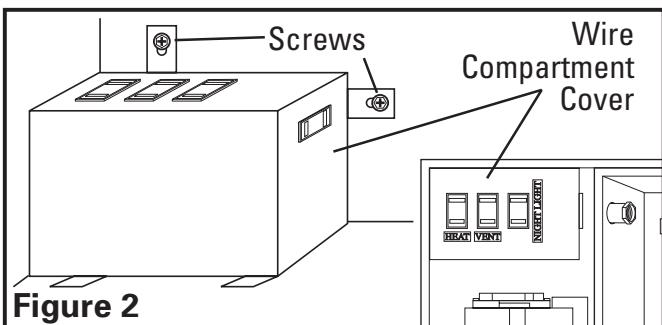


Figure 2

**WARNING: DO NOT INSTALL OVER A TUB OR MOUNT IN A SHOWER STALL ENCLOSURE.**

4. Choose the location for your unit. To ensure the best air and sound performance, it is recommended that the length of ducting and the number of elbows be kept to a minimum, and that insulated hard ducting be used. Larger duct sizes will reduce noise and airflow restrictions. This fan will require at least 7" of clearance in the ceiling, and will mount through drywall up to 3/4" thick. The fan can be mounted directly to the joist using the mounting tabs on the side of the housing or between 16" on center joists using the 4 provided mounting rails.

5. Remove the electrical knockouts using a straight-blade screw driver (Figure 3).

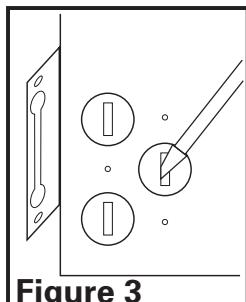


Figure 3

## SECTION 2

### New Construction

1. **Mounting Rail Installation:** Install the rails on the housing and position the housing next to the joist. Line up housing so it will be flush with the finished ceiling. Secure the ends of the rails with screws or nails (not included) to the joists and slide housing into final position (Figure 4).

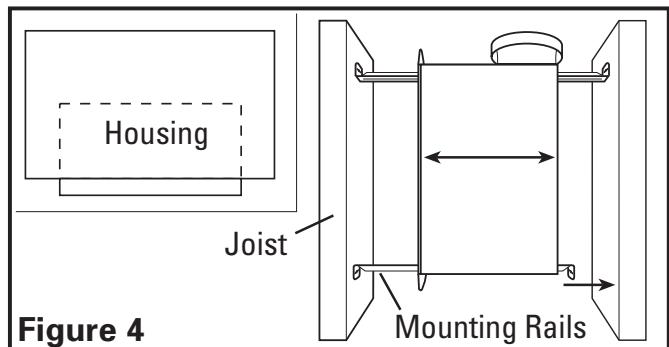


Figure 4

- 1a. **Mounting Tab Installation:** Line up housing so that it will be flush with the finished ceiling. Position the fan so that the tabs rest flat against the joist and secure with screws or nails (not provided) to ensure proper installation (Figure 5).

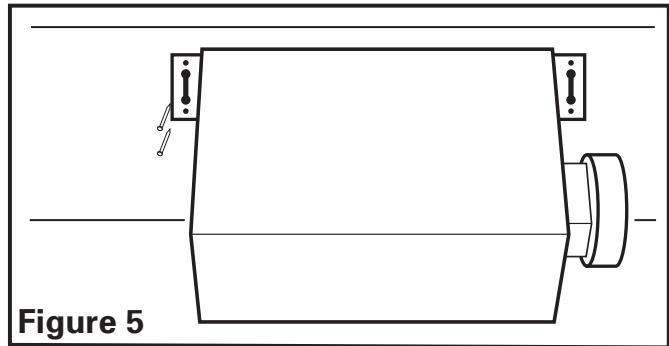


Figure 5

## SECTION 3

### Existing Construction

1. **Mounting Rail Installation:** Set housing in position between the joist and trace an outline onto the ceiling material (Figure 6). Set housing aside and cut opening, being careful not to cut or damage any electrical or other hidden utilities. Install the rails on the housing and position the housing in the previously cut hole so that it is flush with the finished ceiling. Secure the ends of the rails to the joists with screws or nails (not provided) to ensure proper installation (Figure 4).

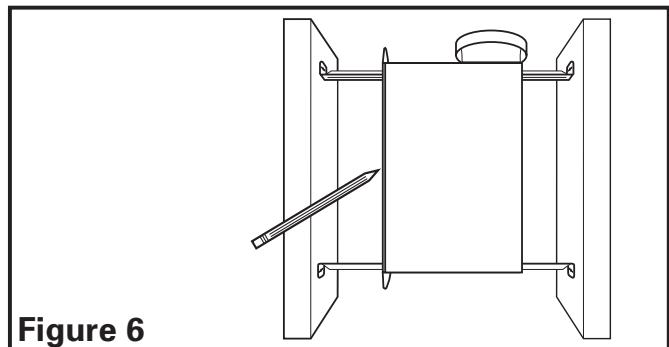
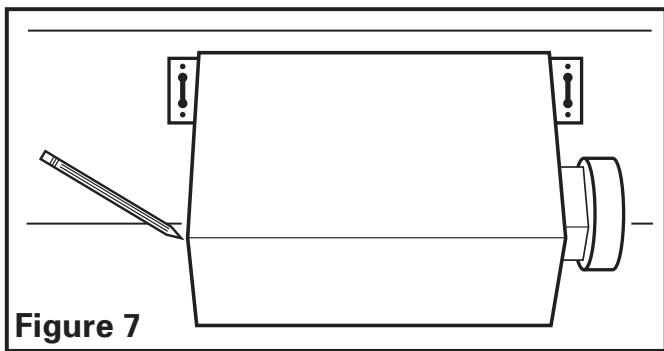


Figure 6

1a. **Mounting Tab Installation:** Position housing against the joist and trace an outline of the housing onto the ceiling material (**Figure 7**). Set housing aside and cut opening, being careful not to cut or damage any electrical or other hidden utilities. Place housing next to the joist and insure that it is flush with the finished ceiling. Secure with screws or nails (not provided) to the joists (**Figure 5**).



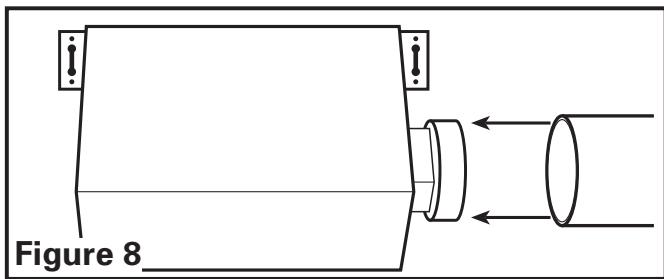
**Figure 7**

## SECTION 4

### Ducting

#### CAUTION: ALL DUCTING MUST COMPLY WITH LOCAL AND NATIONAL BUILDING CODES.

1. Remove any tape that might be holding the damper in place during shipping and connect the ducting to the fan's duct collar (**Figure 8**). Secure in place using tape or screw clamp. Always duct the fan to the outside through a wall or roof cap.



**Figure 8**

## SECTION 5

### Wiring

#### CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.

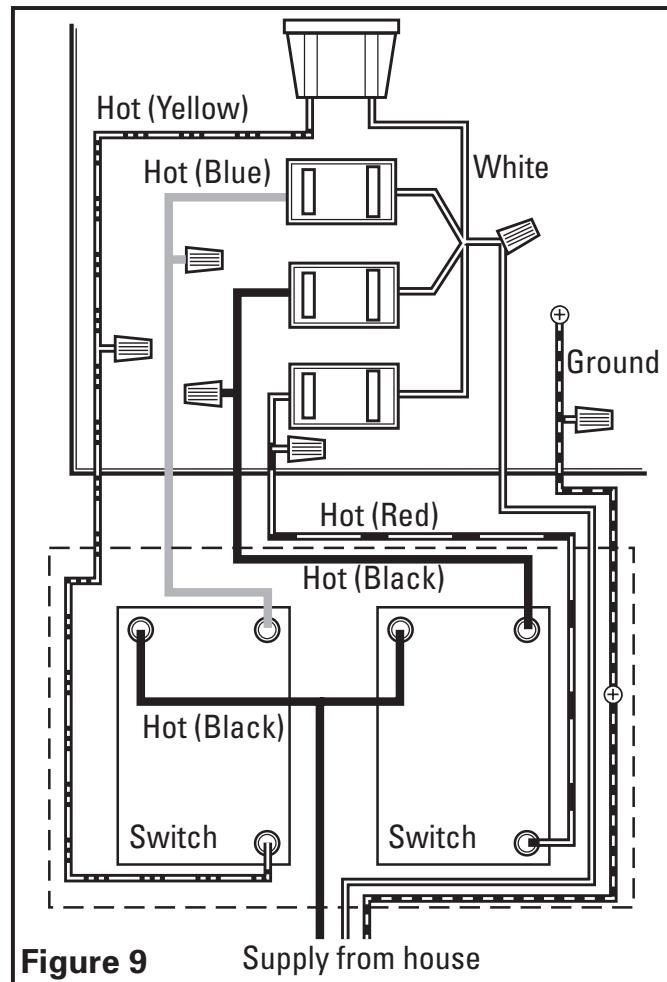
#### WARNING: THIS UNIT MUST BE WIRED ON A SEPARATE 20 AMP CIRCUIT.

#### CAUTION: ALL ELECTRICAL CONNECTIONS MUST BE MADE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, OR NATIONAL ELECTRICAL CODE. IF YOU ARE UNFAMILIAR WITH METHODS OF INSTALLING ELECTRICAL WIRING, SECURE THE SERVICES OF A QUALIFIED ELECTRICIAN.

1. Using wiring carrying the appropriate rating, run a dedicated line on a 20 amp service from the main service panel to an approved wall junction box (not included). Once inside the junction box, split the hot (black) wire from the home and connect one end to each of the switches into the terminal marked "COMMON TERMINAL". Connect the ground (green or bare copper) wire from the home to

the junction box. The neutral (white) wire from the home is not connected to the switch or junction box, but will be run to the unit's wire compartment. Use approved methods for all connections.

2. Run wiring from wall switches carrying the appropriate rating. One neutral (white), one ground (green or bare copper), and four hot (black, red, blue, yellow) leads connected to the switch, one for each function). Secure the electrical wires to the housing with an approved electrical connector. Make sure you leave enough wiring in the box to make the connection to the fan's receptacles.
3. Connect the white wire from the house to the four white wires from the fan. Connect one hot (black) wire from the wall switch to the black wire from the fan (this is the fan control). Connect second hot (red) wire from the wall switch to the red wire from the fan (this is the heat control). Connect the third hot (blue) wire from the wall switch to the blue wire from the fan (this is the main light control). Connect the fourth hot (yellow) wire from the wall switch to the yellow wire from the fan (this is the night light control). Connect the ground wire from the house to the green wire from the fan (**Figure 9**). Use approved methods for all connections.



**Figure 9** Supply from house

4. Reinstall the wire compartment cover by sliding the tabs at the bottom of the cover into the slots in the housing. Make sure all wires are tucked inside of the compartment and are not being pinched or showing through. Reinstall the two screws removed in **Step 3 of SECTION 1 Preparing the Unit (Figure 10)**.

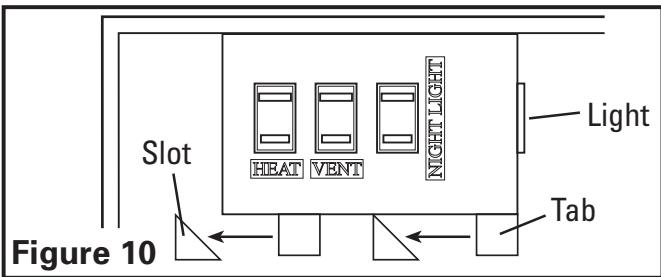


Figure 10

## SECTION 6

### Completing the Installation

1. Insert the plug from the heating unit into the receptacle marked "HEAT", and the plug from the fan into the receptacle marked "VENT" (Figure 11).

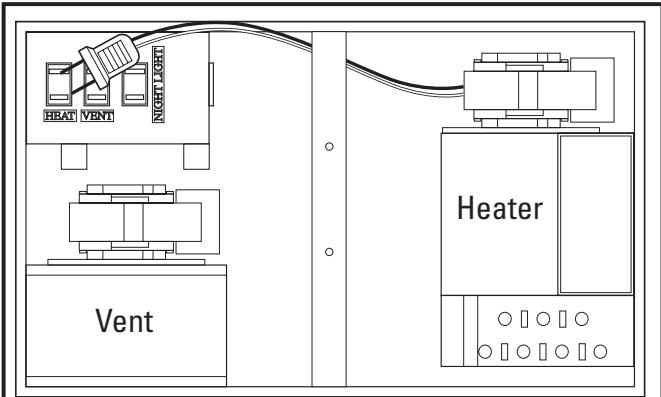


Figure 11

2. Remove grill from carton and open light lens area by pushing in on the two tabs of the light lens and pulling outward from lens. The lens will swing open on the connector bars. DO NOT remove the lens from the grill (Figure 12).

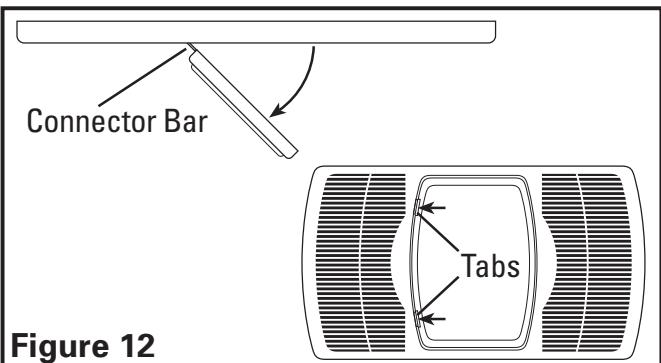


Figure 12

3. Install light reflector into grill by lining up the posts on grill with the holes in light reflector (Figure 13). Raise light reflector and grill up to housing and insert plug from light into receptacle marked "LIGHT" (located on the side of the wire compartment) and insert plug from night light into receptacle marked "NIGHT LIGHT" (Figure 11).

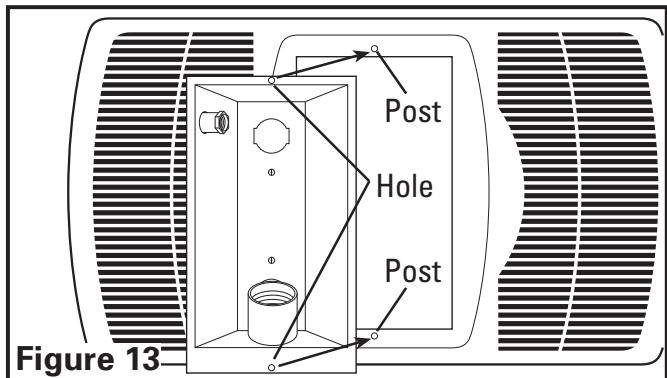


Figure 13

4. Attach light reflector in place with the two screws removed during Step 2 in **SECTION 1** *Preparing the Unit* so grill fits snugly against ceiling (Figure 14).

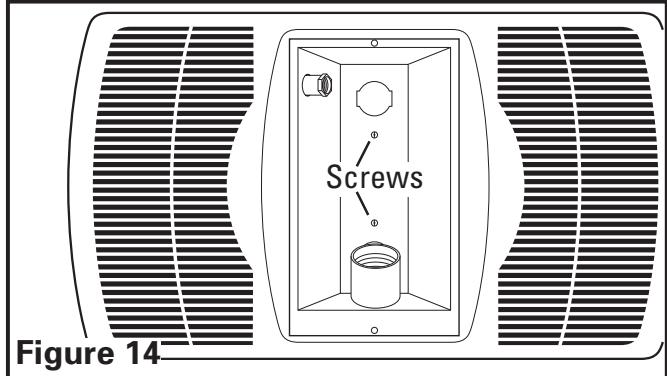


Figure 14

**CAUTION: FAILURE TO SECURE THE REFLECTOR SCREWS MAY RESULT IN A RATTLING OR HUMMING NOISE.**

5. Install the appropriate bulbs (not included) specific to your model:  
**AK965L:** Install a 100 watt maximum, type A19 medium base incandescent bulb (not included) and a 7 watt maximum type C7 (candelabra base) night light (not included).

**WARNING: TO REDUCE THE RISK OF FIRE, USE ONLY TYPE G24-d3, QUAD 2-PIN LAMP, 26 WATT MAXIMUM.**

**AK965FL:** Install a high efficacy 26 watt maximum, 2 pin quad, G24-d3 fluorescent bulb (not included) and a 7 watt maximum type C7 (candelabra base) night light (not included).

6. Close the light lens and secure in place by swinging back into position and snapping the tabs in place (Figure 15).

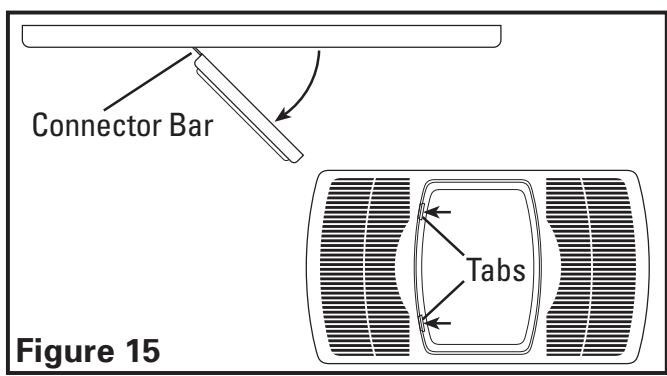


Figure 15

7. Restore power and test your installation.

## SECTION 7

### Use and Care

#### CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE SERVICING THE UNIT.

1. **Cleaning the Grill:** Reverse the instructions in **Section 6 Completing the Installation** to remove grill. Use a mild detergent, such as dishwashing liquid, and dry with a soft cloth. NEVER USE ANY ABRASIVE PADS OR SCOURING POWDERS. Completely dry grill before reinstalling. Refer to instructions in **Section 6 Completing the Installation**, to reinstall grill.
2. **Cleaning the Fan Assembly:** Wipe all parts with a dry cloth or gently vacuum the fan. NEVER IMMERSE ELECTRICAL PARTS IN WATER.

#### CAUTION: ALLOW BULBS TO COOL BEFORE REPLACING.

3. **Changing the Light Bulb:** Disconnect power to the unit. Open light lens by pushing in on the two tabs of light lens and pulling outward from lens. The lens will swing open on the connector bars. DO NOT remove the lens from the grill (**Figure 16**).

**Incandescent Bulb (AK965L):** Unscrew bulb from lamp holder and replace with a 100 watt maximum, type A19 medium base incandescent bulb.

#### WARNING: TO REDUCE THE RISK OF FIRE, USE ONLY TYPE G24-d3, QUAD 2-PIN LAMP, 26 WATT MAXIMUM.

**Fluorescent Bulb (AK965FL):** Remove bulb by gently rocking bulb back and forth while applying outward pressure to release the bulb from the base. Replace with a High Efficacy 26 watt maximum, 2 pin quad, G24-d3 fluorescent bulb.

**Night Light (AK965L, AK965FL):** Unscrew night light bulb from socket and replace with a 7 watt maximum type C7 (candelabra base) night light bulb.

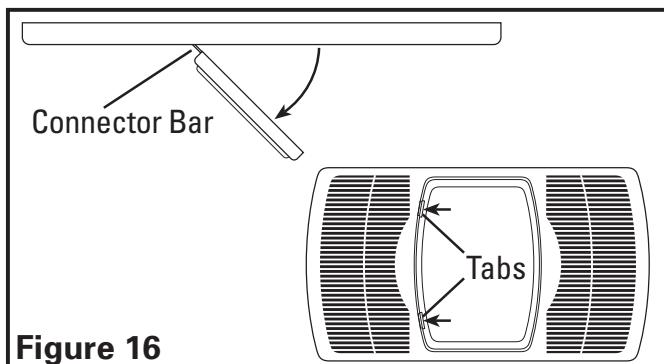


Figure 16

## Troubleshooting Guide

Trouble	Probable Cause	Suggested Remedy
1. Fan does not operate when the switch is on.	1a. A fuse may be blown or a circuit tripped. 1b. Connector plug from motor is not plugged in. 1c. Wiring is not connected properly. 1d. Motor has stopped operating.	1a. Replace fuse or reset circuit breaker. 1b. Turn off power to unit. Remove Grill and plug motor into receptacle in housing. Restore power to unit. 1c. Turn off power to unit. Check that all wires are connected. 1d. Replace motor.
2. Fan is operating, but air moves slower than normal.	2. Obstruction in the exhaust ducting.	2. Check for any obstructions in the ducting. The most common are bird nests in the roof cap or wall cap where the fan exhausts to the outside.
3. Fan is operating louder than normal.	3a. Motor is loose. 3b. Fan blade is hitting housing of unit.	3a. Turn off power to unit. Remove grill and check that all screws are fully tightened. Restore power to unit. 3b. Call your dealer for service.

## LIMITED WARRANTY

All products manufactured by Air King Limited are warranted for one year from the date of purchase against defects in workmanship and/or material. In addition, all ventilating/exhaust fans, heaters, combination fan lights and/or heaters, and range hoods are guaranteed for five years from the date of purchase against defects in workmanship and/or material.

This warranty does not cover any labor or shipping costs or the cost of replacement components as part of routine maintenance such as: range hood grease filters, charcoal filters or combination charcoal/grease filters; replacement light bulbs in range hoods or bathroom fan/light/bulb heater combinations. As well, any damage or failure caused by abuse, misuse, abnormal usage, faulty installation, or improper maintenance will not be covered by this warranty.

In order to make a claim on this warranty, you must be the original consumer of the product. You will be required to present to Air King the original bill of sale showing: date of purchase, place of purchase and model purchased. Failure to meet these requirements will void your warranty.

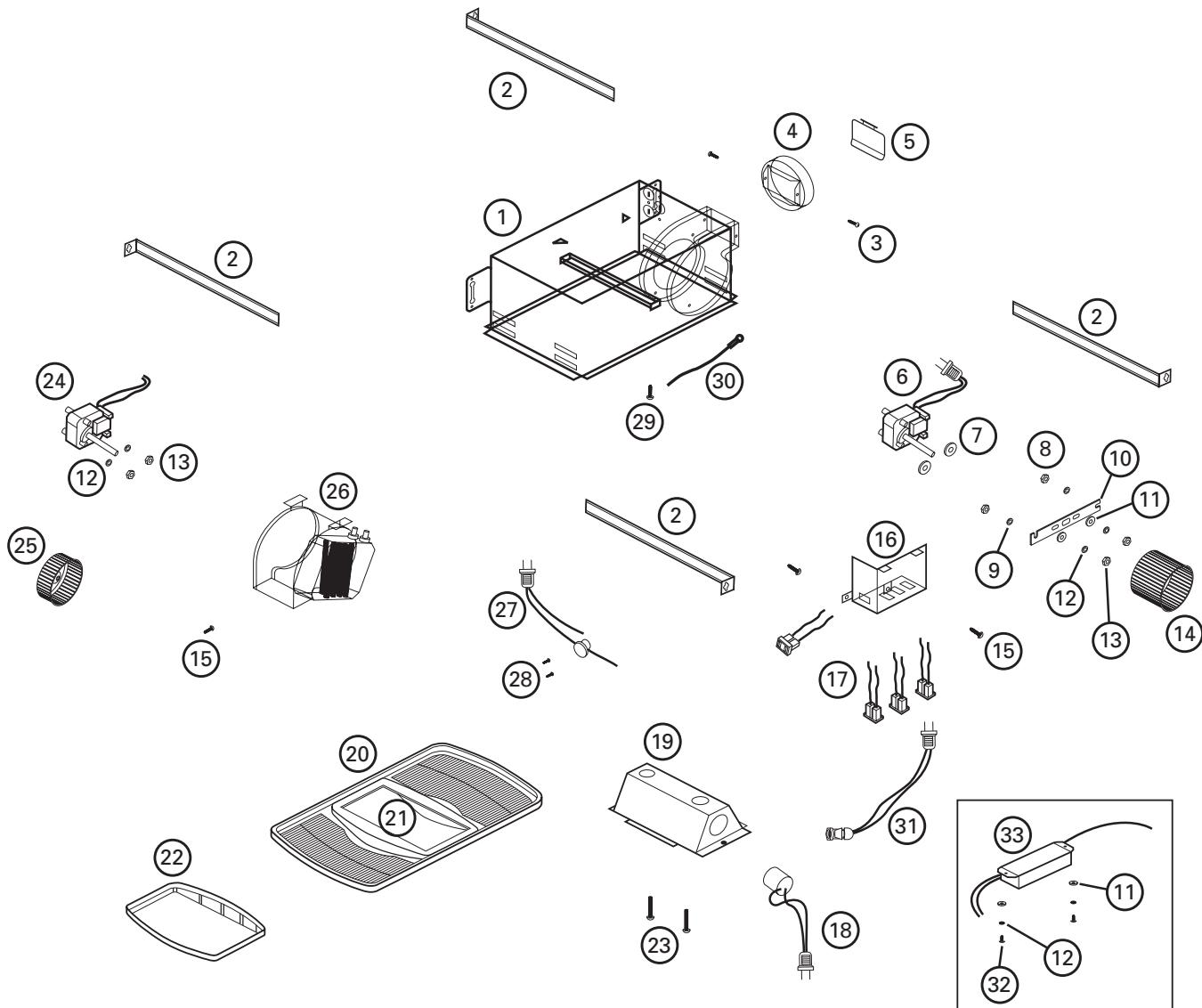
Air King will not be held responsible for any bodily injury or damages to personal property or real estate whether caused directly or indirectly by the product. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty lasts, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state and province to province.

## FOR PARTS OR TECHNICAL ASSISTANCE

Please call: 1-800-465-7300, MONDAY THROUGH FRIDAY, BETWEEN THE HOURS OF 8 AM AND 4:00 PM EST.  
PLEASE DO NOT RETURN PRODUCT TO PLACE OF PURCHASE.

Reference the type and style of product (located on label inside of the product) when you call.  
For more information please visit our website: [www.airkinglimited.com](http://www.airkinglimited.com)

# REPLACEMENT PARTS DIAGRAM



#	Qty.	Description	Replacement Part #
1	1	Fan Housing	5S3402039
2	4	Mounting Rails	5S1299002
3	2	Collar Screw	5S3402040
4	1	Collar	5S3402041
5	1	Damper	5S3402042
6	1	Motor - Vent	5S3402043
7	2	Motor Spacer	5S3402044
8	2	Motor Bracket Nut	5S3402045
9	2	Lock Washer	5S3402046
10	1	Motor Bracket - Vent	5S3402047
11	2	Washer	5S3402048
12	4	Lock Washer	5S3402049
13	4	Hex Nut	5S3402050
14	1	Vent Blower Wheel	5S3402051
15	3	#8 Screw	5S1999004
16	1	Wire Compartment	5S3402097
17	4	Receptacle	5S3402053

#	Qty.	Description	Replacement Part #
18	1	Lamp Holder - AK965	5S3402054
	1	Lamp Holder - AK965FL	5S3402071
19	1	Reflector	5S3402055
20	1	Grill	5S3402056
21	1	Lens Frame	5S3402057
22	1	Glass Lens	5S3402058
23	2	Reflector Screws	5S3402059
24	1	Motor - Heater	5S3402060
25	1	Heater Blower Wheel	5S3402061
26	1	Blower - Heater	5S3402062
27	1	Heater Plug Assembly	5S3402063
28	2	Over Heat Protector Screw	5S3402064
29	1	#10 Ground Screw	5S1999002
30	1	14 ga Ground Wire	5S1999003
31	1	Lamp Holder - Night Light	5S3402068
32	2	Ballast Screws - AK965FL	5S3402069
33	1	Ballast - AK965FL	5S3402070

Installer: \_\_\_\_\_

Installation Date: \_\_\_\_\_

Place of Purchase: \_\_\_\_\_

Model Number: \_\_\_\_\_